

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application. Applicants note that claim 84 is cancelled and replaced by claim 117, which re-presents claim 84 in independent form.

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1-57. (cancelled)

58. (previously added) A method for the production of 1,2,3,4-tetrahydroxybenzene, comprising:

a) incubating, in the presence of a carbon source, a first microbe comprising a recombinant DNA encoding *myo*-inositol-1-phosphate synthase and a second microbe which expresses inositol dehydrogenase activity to produce *myo*-2-inosose; and

b) converting the *myo*-2-inosose to 1,2,3,4-tetrahydroxybenzene by acid catalyzed dehydration.

59. (currently amended) The method of claim 58 wherein the first microbe comprises an *INO1* gene.

60. (currently amended) The method of claim 59 wherein the *INO1* gene comprises ~~an~~ a *Saccharomyces cerevisiae* *INO1* gene.

61. (currently amended) The method of claim 60 wherein the *INO1* gene is comprised by ~~comprises~~ pAD1.88A.

62. (previously added) The method of claim 58 wherein the first microbe is an *Escherichia coli*.

63. (previously added) The method of claim 62 wherein the *Escherichia coli* is JWF1/pAD1.88A.

64. (previously added) The method of claim 58 wherein the second microbe is *Gluconobacter oxydans*.

65. (previously added) The method of claim 64 wherein the *Gluconobacter oxydans* is ATCC 621.

66. (previously added) The method of claim 58 wherein the second microbe comprises a recombinant DNA encoding inositol dehydrogenase.

67. (previously added) The method of claim 58 wherein the DNA encoding inositol dehydrogenase comprises a *Bacillus subtilis iolG* gene.

68. (previously added) The method of claim 58 wherein the carbon source comprises glucose.

69. (previously amended) A method for the production of 1,2,3-trihydroxybenzene, comprising producing 1,2,3,4-tetrahydroxybenzene in accordance with claim 58 and reducing the 1,2,3,4-tetrahydroxybenzene to 1,2,3-trihydroxybenzene.

70-78. (withdrawn)

79. (previously added) A microbe comprising a recombinant DNA encoding *myo*-inositol-1-phosphate synthase.

80. (currently amended) The microbe of claim 79 wherein the recombinant DNA encoding *myo*-inositol-1-phosphate synthase comprises an *INO1* gene.

81. (currently amended) The microbe of claim 80 wherein the *INO1* gene comprises a *Saccharomyces cerevisiae INO1* gene.

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82. (currently amended) The microbe of claim 81 wherein the *INO1* gene is comprised
by comprises pAD1.88A.

83. (previously added) The microbe of claim 79 which is an *Escherichia coli*.

84. (cancelled)

85. (withdrawn)

86. (withdrawn)

87. (previously added) A fermentation composition comprising a first microbe which comprises a recombinant DNA encoding *myo*-inositol-1-phosphate synthase and a second microbe which expresses inositol dehydrogenase.

88. (previously added) The fermentation composition of claim 87 wherein the first microbe comprises an *INO1* gene.

89. (previously added) The fermentation composition of claim 88 wherein the *INO1* gene comprises a *Saccharomyces cerevisiae* *INO1* gene.

90. (previously added) The fermentation composition of claim 89 wherein the *INO1* gene is comprised by comprises pAD1.88A.

91. (previously added) The fermentation composition of claim 87 wherein the first microbe is an *Escherichia coli*.

92. (previously added) The fermentation composition of claim 91 wherein the *Escherichia coli* is JWF1/pAD1.88A.

93. (previously added) The fermentation composition of claim 87 wherein the second microbe is *Gluconobacter oxydans*.

94. (previously added) The fermentation composition of claim 93 wherein the *Gluconobacter oxydans* is ATCC 621.

95. (previously added) The fermentation composition of claim 87 wherein the second microbe comprises a recombinant DNA encoding inositol dehydrogenase.

96. (previously added) The fermentation composition of claim 95 wherein the DNA encoding inositol dehydrogenase comprises a *Bacillus subtilis* *iolG* gene.

97. (previously added) The fermentation composition of claim 87 further comprising glucose.

98-104. (withdrawn).

105. (previously added) A method for the production of 1, 2, 3, 4-tetrahydroxybenzene, comprising:

- a) incubating, in the presence of a carbon source, a first microbe comprising a recombinant DNA encoding myo-inositol-1-phosphate synthase ~~myo-inositol 1-synthase~~, thereby forming *myo*-inositol;
- b) incubating the *myo*-inositol in the presence of a second microbe which expresses inositol dehydrogenase activity, thereby forming *myo*-2-inosose; and
- c) converting the *myo*-2-inosose to 1, 2, 3, 4-tetrahydroxybenzene by acid catalyzed dehydration.

106. (currently amended) The method of claim 105 wherein the first microbe comprises an *INO1* gene.

107. (currently amended) The method of claim 106 wherein the *INO1* gene comprises a *Saccharomyces cerevisiae* *INO1* gene.

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108. (currently amended) The method of claim 107 wherein the *INO1* gene is comprised by comprises pAD1.88A.

109. (previously added) The method of claim 105 wherein the first microbe is an *Escherichia coli*.

110. (previously added) The method of claim 109 wherein the *Escherichia coli* is JWF1/pAD1.88A.

111. (previously added) The method of claim 105 wherein the second microbe is *Gluconobacter oxydans*.

112. (previously added) The method of claim 111 wherein the *Gluconobacter oxydans* is ATCC 621.

113. (previously added) The method of claim 105 wherein the second microbe comprises a recombinant DNA encoding inositol dehydrogenase.

114. (previously added) The method of claim 105 wherein the DNA encoding inositol dehydrogenase comprises a *Bacillus subtilis iolG* gene.

115. (previously added) The method of claim 105 wherein the carbon source comprises glucose.

116. (previously added) A method for the production of 1,2,3-trihydroxybenzene, comprising producing 1,2,3,4-tetrahydroxybenzene in accordance with claim 105 and reducing the 1,2,3,4-tetrahydroxybenzene to 1,2,3-trihydroxybenzene.

117. (re-presented – formerly dependent claim 84) A microbe comprising a recombinant DNA encoding *myo*-inositol-1-phosphate synthase , wherein the ~~The microbe is of claim 83~~ ~~wherein the *Escherichia coli* is JWF1/pAD1.88A.~~